Periodical Publications - Europe
Nottingham

A
Meteorological Regiſter,

KEPT AT

Mansfield Woodhouſe, in Nottinghamſhire;

FROM THE COMMENCEMENT OF THE YEAR 1785, TO THE END OF THE YEAR 1794.

TO WHICH ARE SUBJOINED,

The moſt probable Indications of Weather,

DEDUCIBLE FROM THE

CHANGES IN THE BAROMETER:

WITH

TWO PLATES;

DESCRIBING THE

EXTRAORDINARY EFFECTS OF LIGHTNING,

AND THE

Appearance of a Singular Meteor.

Nottingham:
PRINTED BY S. TUPMAN, OPPOSITE THE WHITE LION.
1795.

BRITISH MUSEUM

TO

The Right Hon. Frederick Montagu;

AS AN

ENLIGHTENED JUDGE,

AND

CONSTANT FAVOURER

OF ALL ENDEAVOURS TENDING TO THE

Advancement of Science:

AND IN

ACKNOWLEDGEMENT OF HIS HIGHLY VALUED FRIENDSHIP TO THE COMPILER, THIS

LITTLE TRACT,

IS RESPECTFULLY INSCRIBED,

By His very Faithful,

And Obedient

Humble Servant,

HAYMAN ROOKE.

MANSFIELD WOODHOUSE,
APRIL, 1795.

PREFACE.

A Very respectable Friend having expressed a wish to see a REGISTER *of the* WEATHER *for the last Ten Years, I have been induced to* PUBLISH *the following Abridgement of my* METEOROLOGICAL JOURNAL. *Wishing to render this trifle acceptable to Him and the rest of my Friends, (for whom only it is printed,) I have added some Observations on the* BAROMETER, *taken from the Works of Meteorologists.*

The very extraordinary and powerful Effects of Lightning, herein mentioned, to which I was an Eye-witness, will shew how necessary it is to have Conductors.

As the variation of the Compass may be looked upon as one of the extraordinary Phænomena of Nature, I have given the declination of the Magnatic Needle in England, from the Year 1576 *to the Year* 1780.

PREFACE.

It will be necessary to observe, in the Register of the Weather, that the first Column includes every Day of Frost in that Month, many of which being fine Days, are reckoned in the Column of Fair, so that the number of Days set down, will sometimes appear to be more than there are in that Month; as in the Month of February 1785, *where there are* 22 *Days of Frost,* 9 *of Snow,* 4 *of Rain, and* 15 *Fair, which added together, make* 50 *Days; but if the* 22 *Days Frost, which are included in the Columns of Snow and Fair, be deducted, there will then remain* 28 *Days; so in some of the other Months.*

The greatest rise and fall of Fahrenheiſt's Thermometer, *are marked at the bottom of the Annual Registers.*

I do not pretend to offer this as a Philosophical Register; such an Undertaking would have required a stationary Residence, which I could not conveniently submit to.

⁂ *The Columns of Mild, or Hot, denote the number of Mild Days in Winter, and Hot in Summer.*

REGISTER of the WINDS, for the YEAR 1785.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	0	2	0	4	3	11	6	5
February	3	1	1	1	6	2	3	11
March	0	0	1	0	20	0	0	10
April	1	0	0	0	5	5	3	16
May	0	9	0	0	1	8	4	9
June	0	2	0	0	7	11	7	3
July	0	13	0	0	3	5	7	3
Auguſt	0	8	0	0	3	3	4	13
September	0	12	0	0	1	2	11	4
October	1	11	0	0	2	1	7	9
November	1	9	0	0	1	2	7	10
December	0	4	2	0	8	9	3	5
Total.	6	71	4	5	60	59	62	98

REGISTER of the WEATHER for the YEAR 1785.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	7	6	13	12	0	0
February	22	9	4	15	0	0
March	22	8	0	23	0	0
April	5	2	4	24	1	0
May	2	0	9	22	2	1
June	0	0	5	25	15	1
July	0	0	14	17	3	2
Auguſt	0	0	16	15	0	1
September	3	0	15	15	0	2
October	3	2	12	17	3	1
November	12	3	9	18	1	0
December	11	4	11	16	0	0
TOTAL.	87	34	112	219	25	8

February the 18th, Thermometer 24.° June 24th, Thermometer, 80.°

REGISTER of the WINDS for the YEAR 1786.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	0	6	4	3	1	3	11	3
February	7	11	0	0	2	2	2	4
March	5	7	3	0	6	1	3	6
April	3	2	9	3	5	1	3	4
May	3	16	0	0	5	1	3	3
June	7	10	1	0	6	1	4	1
July	0	9	5	1	4	0	7	5
Auguſt	0	17	1	2	0	5	2	4
September	5	14	1	1	3	1	1	4
October	6	8	5	1	1	5	1	4
November	1	2	0	2	13	12	0	0
December	0	6	5	6	0	5	3	6
TOTAL.	37	108	34	19	46	37	40	44

REGISTER of the WEATHER for the YEAR 1786.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	10	5	6	10	0	0
February	9	3	5	11	1	0
March	17	8	7	16	0	0
April	2	4	3	22	2	0
May	1	0	12	18	6	0
June	0	0	7	23	8	2
July	0	0	8	23	4	1
Auguſt	0	0	18	13	1	2
September	6	0	15	15	0	0
October	4	0	10	21	3	0
November	4	2	10	15	0	0
December	15	5	10	16	0	0
TOTAL.	68	27	111	203	25	5

January the 3d, Thermometer 25.° June 4th, Thermometer 79°

REGISTER of the WINDS for the YEAR 1787.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	4	8	0	0	1	9	3	6
February	1	12	0	0	0	4	10	1
March	2	11	0	4	1	~~6~~ 5	5	2
April	2	6	2	0	10	1	0	9
May	5	5	3	0	4	5	7	2
June	2	13	0	3	2	3	4	3
July	3	21	0	1	3	2	1	1
Auguſt	0	4	0	0	0	2	11	14
September	1	4	0	0	13	2	8	2
October	2	13	0	3	1	1	8	2
November	0	5	2	0	0	4	5	14
December	0	2	5	0	1	5	10	8
TOTAL.	22	104	12	11	36	44	72	64

REGISTER of the WEATHER for the YEAR 1787.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	12	3	5	23	0	0
February	3	0	11	17	6	0
March	3	1	9	21	9	0
April	2	1	9	20	0	0
May	0	0	7	24	5	1
June	0	0	11	19	2	2
July	0	0	22	9	5	3
Auguſt	0	0	7	24	6	1
September	2	0	10	20	0	0
October	3	0	20	11	2	0
November	14	0	8	22	2	0
December	9	4	13	14	3	0
TOTAL.	48	9	132	224	40	7

January 26, Thermometer 28.° July 5, Thermometer 79.°

REGISTER of the WINDS for the YEAR 1788.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	1	9	3	2	3	1	3	9
February	4	6	2	0	5	6	1	5
March	8	2	2	0	2	7	5	4
April	1	17	0	3	0	2	1	6
May	4	1	0	1	11	5	6	3
June	4	4	3	0	10	2	2	5
July	0	9	0	6	0	0	10	6
Auguſt	0	10	0	1	3	1	12	4
September	0	13	0	0	3	2	8	4
October	4	11	2	0	3	0	1	10
November	3	9	2	3	3	2	5	3
December	1	3	8	0	5	1	1	12
TOTAL.	30	94	22	16	48	29	55	71

REGISTER of the WEATHER for the YEAR 1788.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	9	1	11	19	2	0
February	5	5	12	12	0	0
March	11	5	8	18	3	0
April	0	2	13	15	3	0
May	0	0	7	24	5	1
June	3	0	10	20	2	0
July	0	0	19	12	2	3
Auguſt	0	0	14	17	3	1
September	1	0	17	13	2	2
October	8	0	6	25	3	0
November	9	1	2	27	10	0
December	26	12	3	16	1	0
TOTAL.	72	26	122	218	36	7

January the 14th, Thermometer 29°. Auguſt the 3d, Thermometer 79°.

REGISTER of the WINDS, for the YEAR 1789.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	3	6	1	0	4	2	13	2
February	2	9	0	3	5	0	6	3
March	11	3	1	0	6	1	0	9
April	0	14	0	1	3	4	3	5
May	1	6	0	3	4	6	7	4
June	4	4	0	2	0	8	7	5
July	2	2	1	7	0	5	10	4
Auguſt	1	3	1	0	4	5	15	2
September	1	4	2	0	1	2	14	6
October	2	4	1	1	2	11	7	3
November	3	5	0	0	2	10	4	6
December	0	7	0	0	0	1	21	2
Total.	30	67	7	17	31	55	107	51

REGISTER of the WEATHER for the YEAR 1789.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	15	6	10	15	3	0
February	3	1	21	6	1	0
March	16	12	5	14	0	0
April	4	1	11	18	1	0
May	0	0	15	16	3	0
June	0	0	19	11	2	4
July	0	0	24	7	1	4
Auguſt	0	0	11	20	6	0
September	2	0	18	12	0	1
October	2	0	20	11	0	0
November	5	0	16	14	0	0
December	5	1	10	20	8	0
TOTAL.	52	21	180	164	25	9

January the 5th, Thermometer 20.° Auguſt 11th, Thermometer, 80.°

REGISTER of the WINDS for the YEAR 1790.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	0	5	0	0	1	6	13	6
February	0	11	0	0	1	0	13	3
March	3	3	1	3	10	3	1	7
April	3	2	2	1	14	4	4	0
May	3	5	0	1	5	7	8	2
June	0	11	0	2	2	5	8	2
July	0	16	0	2	1	2	6	4
Auguſt	2	11	0	2	0	9	4	3
September	0	8	2	0	3	1	8	8
October	5	7	1	0	3	7	4	4
November	11	4	0	1	3	6	1	4
December	2	11	0	2	4	4	2	6
TOTAL.	29	94	6	14	47	54	72	49

REGISTER of the WEATHER for the YEAR 1790.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	10	1	9	21	5	0
February	8	0	5	23	10	0
March	5	0	4	27	5	0
April	3	2	6	22	0	0
May	0	0	18	13	2	2
June	0	0	17	13	2	2
July	0	0	16	15	0	2
Auguſt	0	0	15	16	3	0
September	2	0	13	17	0	1
October	4	0	12	19	2	0
November	6	1	10	19	0	0
December	9	3	13	15	1	1
TOTAL.	47	7	138	220	30	8

January the 20th, Thermometer 28.° Auguſt 20th, Thermometer 80.°

REGISTER of the WINDS for the YEAR 1791.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	0	5	0	3	1	6	13	3
February	3	7	7	1	2	1	6	1
March	2	9	5	0	0	2	4	9
April	8	4	2	1	2	6	6	1
May	4	7	1	0	7	5	1	6
June	5	2	0	0	7	6	5	5
July	0	12	0	2	0	2	10	5
Auguſt	2	8	0	2	3	3	9	4
September	4	2	1	1	1	6	9	6
October	1	6	0	4	4	1	12	3
November	2	2	0	4	7	0	13	2
December	0	5	0	5	0	1	7	13
TOTAL.	31	69	16	23	34	39	95	58

REGISTER of the WEATHER for the YEAR 1791.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	8	2	17	12	3	0
February	10	3	7	18	2	0
March	8	0	4	27	6	0
April	0	0	12	18	7	0
May	3	0	11	20	3	0
June	0	0	7	23	9	0
July	0	0	19	12	3	1
Auguſt	2	0	13	18	2	2
September	1	0	8	22	7	1
October	5	0	17	14	3	1
November	5	0	15	14	3	0
December	21	8	8	15	0	0
TOTAL.	63	13	138	213	48	5

June 7th, Thermometer 76.º December 11, Thermometer 19.º

REGISTER of the WINDS for the YEAR 1792.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	1	4	0	4	0	6	5	11
February	0	5	1	10	3	1	5	4
March	0	3	3	3	1	2	18	1
April	1	2	2	8	3	1	10	3
May	0	2	0	3	7	1	13	5
June	0	4	0	0	2	2	15	7
July	2	2	0	4	0	2	11	10
Auguſt	4	3	1	3	5	2	12	1
September	0	2	0	2	0	0	19	7
October	1	1	1	4	10	3	9	2
November	0	6	0	4	6	1	9	4
December	0	4	0	0	0	3	10	14
TOTAL.	9	38	8	45	37	24	136	69

REGISTER of the WEATHER for the YEAR 1792.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	11	2	8	21	3	0
February	8	4	7	18	8	0
March	8	4	15	12	1	1
April	1	0	12	18	6	1
May	3	0	15	16	0	3
June	1	0	21	9	0	1
July	2	0	14	17	0	0
Auguſt	0	0	12	19	4	0
September	1	0	22	8	0	2
October.	3	0	20	11	4	0
November	5	0	11	19	2	0
December	10	3	13	15	2	0
TOTAL.	53	13	170	183	30	8

February the 21ſt, Thermometer 23°. Auguſt the 22d, Thermometer 76°.

REGISTER of the WINDS, for the YEAR 1793.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	0	6	1	0	2	3	13	6
February	0	2	0	0	1	0	16	9
March	1	5	3	1	4	3	12	2
April	0	0	5	1	6	6	7	5
May	0	3	0	1	7	1	2	17
June	0	4	0	0	1	0	13	12
July	0	1	1	1	3	0	15	10
Auguſt	0	2	0	3	1	3	17	5
September	0	2	0	0	5	2	11	10
October	0	6	0	2	0	1	18	4
November	0	1	1	4	5	1	11	7
December	0	2	0	2	1	1	19	6
Total.	1	34	11	15	36	21	154	93

REGISTER of the WEATHER for the YEAR 1793.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	11	1	11	19	3	0
February	8	1	10	17	3	0
March	10	2	10	19	2	1
April	6	7	8	15	1	1
May	5	1	5	25	1	2
June	1	0	14	16	1	0
July	0	0	6	25	8	1
Auguſt	0	0	16	15	0	1
September	3	0	12	18	0	0
October	2	0	11	20	1	0
November	5	0	10	20	0	0
December	8	0	10	21	13	0
TOTAL.	59	12	123	230	33	6

January the 19th, Thermometer 32.° July 10th, Thermometer, 82.°

REGISTER of the WINDS for the YEAR 1794.

Months.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
January	0	6	0	0	0	0	22	3
February	0	6	1	2	1	0	15	3
March	0	3	5	1	0	1	19	2
April	0	2	0	0	0	2	21	5
May	0	0	0	0	6	0	13	12
June	0	0	1	1	2	6	10	10
July	0	0	0	0	2	2	22	5
Auguſt	0	2	0	1	0	0	12	16
September	0	0	0	1	7	1	13	8
October	0	3	0	0	0	0	20	8
November	0	0	0	2	0	5	16	7
December	0	1	0	3	2	4	15	6
TOTAL.	0	23	7	11	20	21	198	85

REGISTER of the WEATHER for the YEAR 1794.

Months.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
January	19	2	1	28	6	0
February	0	0	13	15	10	0
March	4	0	11	20	6	0
April	0	0	10	20	3	1
May	0	0	12	19	2	1
June	3	0	4	26	5	1
July	0	0	9	22	5	1
Auguſt	0	0	13	18	0	3
September	3	0	14	16	0	0
October	5	0	18	13	0	0
November	3	0	10	20	0	0
December	16	2	10	19	0	0
TOTAL.	53	4	125.	236	37	7

January 3, Thermom. 28.° July 13, Thermom. 84.°. Auguſt 21, Remarble Effects of Lightning, ſee Page 28. October 21ſt. a Singular Meteor, ſee Page 30.

A SYNOPSES of the TEN YEARS REGISTERS.

Years.	*Eaſt.*	*Weſt.*	*North.*	*South.*	*N. E.*	*S. E.*	*S. W.*	*N. W.*
1785	6	71	4	5	60	59	62	98
1786	37	108	34	19	46	37	40	44
1787	22	104	12	11	36	44	72	64
1788	30	94	22	16	48	29	55	71
1789	30	67	7	17	31	55	107	51
1790	29	94	6	14	47	54	72	49
1791	31	69	16	23	34	39	95	58
1792	9	38	8	45	37	24	136	69
1793	1	34	11	15	36	21	154	93
1794	0	23	7	11	20	21	198	85
TOTAL.	195	702	127	176	395	383	991	682

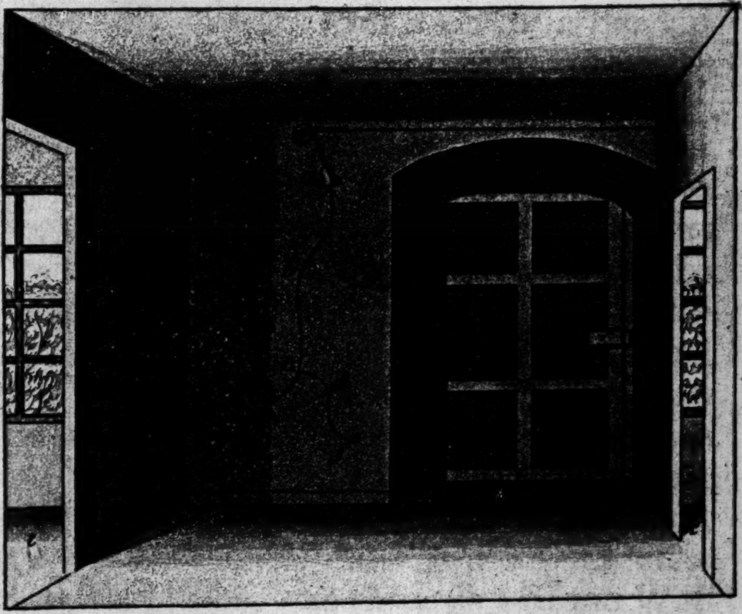
Years.	*Froſt.*	*Snow.*	*Rain.*	*Fair.*	*Mild or Hot.*	*Thunder.*
1785	87	34	112	219	25	8
1786	68	27	111	203	25	5
1787	48	9	132	224	40	7
1788	72	26	122	218	36	7
1789	52	21	180	164	25	9
1790	47	7	138	220	30	8
1791	63	13	138	213	48	5
1792	53	13	170	183	30	8
1793	59	12	123	230	33	6
1794	53	4	125	236	37	7
TOTAL.	602	166	1351	2110	329	70

THE EFFECTS
OF A
THUNDER STORM,
ON THURSDAY, THE TWENTY-FIRST OF AUGUST, 1794.

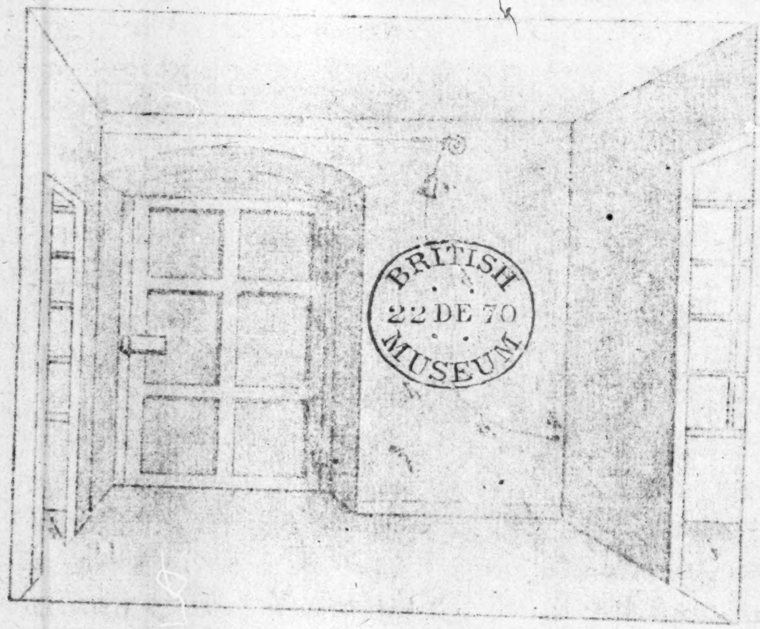
ABOUT two o'Clock, P. M. two very black Clouds were seen towards the South West, which, in their North East course, appeared to attract each other; this attractive power in these Clouds, was occasioned by their being highly charged with a contrary Electricity, which burst out with a violent explosion, as soon as the Clouds came in contact; the vivid flashes of Lightning followed each other in a quick succession, amidst a torrent of Rain and Hail; at that instant, a Ball of Fire was seen to strike the top of a Chimney, in Mr. Wragge's House, near Mansfield, where it was attracted by an Iron Cramp, from whence it descended to the roof, throwing down part of the Chimney, and scattering the Stones to a considerable distance. The Lightning, after running nine Yards along the Roof, penetrated the Ceiling of a Garret, where it tore off a piece about seven Feet in length, and near six Inches in width; it was here attracted by another Iron Cramp, in a sloping Beam, from which it separated a piece of near three Feet in length, and about eleven Inches in circumference; from this Beam it forced its way

through

Pl. 1.



The Paſsage in Mr. Wragges House.



BRITISH 22 DE 70 MUSEUM

through the Floor, to a gilt Frame of a Looking-Glass, in the Drawing-room, where it burst open a Tea-chest, melted a piece of Lead within side, about the size of Half-a-Crown, and scattered a pack of Cards to the other end of the Room; a stream of the Electric Fluid appeared by a black line on the Floor to have run ten Feet to an Iron Fender. The Lightning then took its course downwards to the Parlour, where it run round another gilt Frame of a Looking-glaſs, near to which Mrs. Wragge was sitting, with a Child in her lap, they both received a strong shock, which, in all probability would have been fatal to them, had not a Bell-wire, that was over the Glass, conducted the Electric Fluid to the Bell, in the Passage; its course from thence, is very extraordinary, and will be best explained by referring to the PLATE 1ſt. where (*a*) is the Bell, in the Passage, from whence the Electric Fluid (*b*) descended on the Wall in a narrow stream to (*c*) where it divided into two, that at (*d*) was attracted by the Iron Hinge (*e*) of the street Door, and split the Wood to which the Hinge was nailed, the Passage of the Electric Fluid to the Hinge, was through a Stone Wall eleven Inches thick, and the aperture it made was so small, that it would hardly admit a knitting Needle, see the Hole at (*f*) the other stream (*g*) was attracted through the Wall (*h*) by an Iron Bar in the Kitchen (*i*) where it spent its force, without doing any damage, (*k*) the Parlour.

The Wind was that Day, N. W. the Barometer 29. 8. Thermometer 66°.

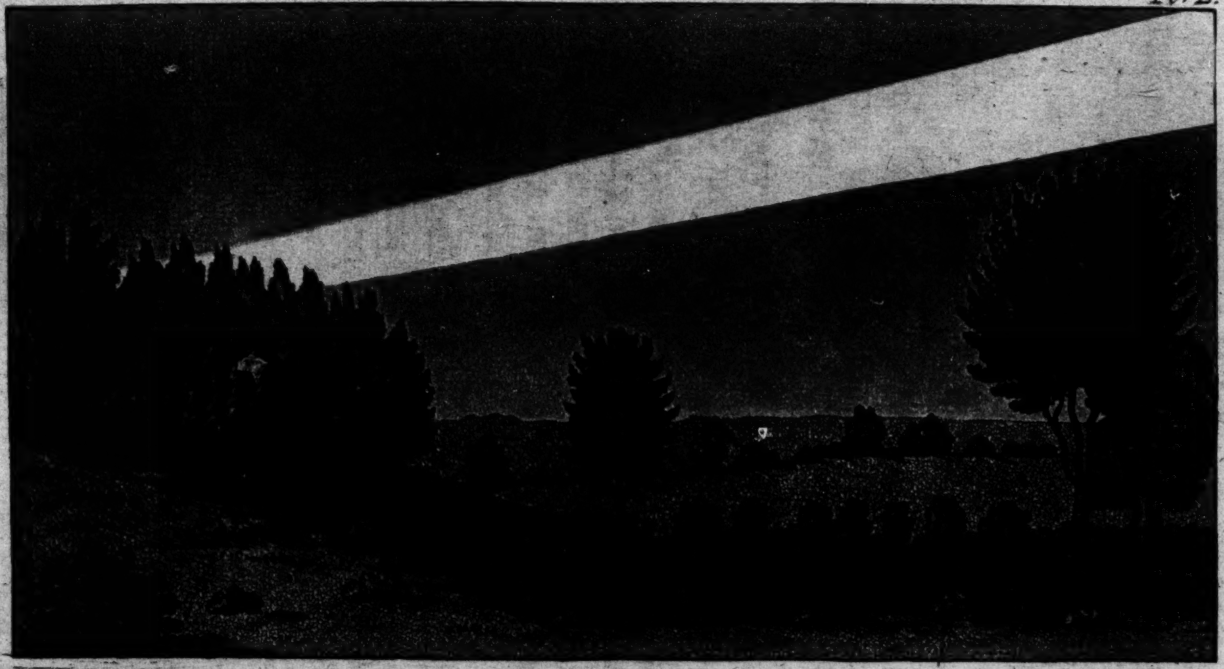
The strong attractive power of these Conductors, ſhew the great utility of Iron Conductors in preſerving Buildings from the dreadful effects of Lightning.

AURORA BOREALIS.

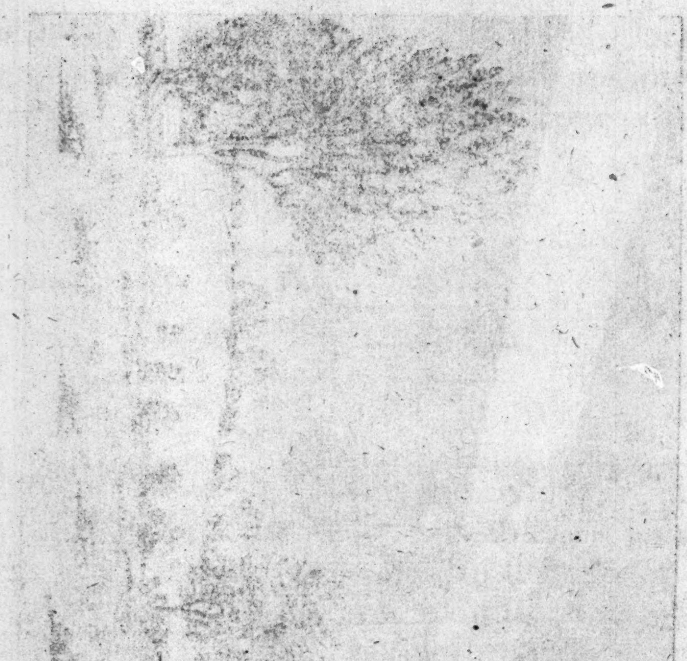
About 8 o'Clock, on Thurſday Night, the 21st of October, 1794, a remarkable Aurora Borealis was seen near Mansfield; its appearance was that of a white steady light, without any of those shooting streams of the Electric Fluid, which are always seen in the common Aurora Borealis; it seemed to extend from N. E. to S. W. and where it was observed from a high situation, it formed a segment of a large circle, see PLATE 2nd. There had been a little Frost in the Morning, the Day was fine, and the Evening perfectly clear.

The Wind, N. W. Barometer 30, Thermometer 47.

Pl. 2.



Appearance of the Meteor as seen from a field behind Mr. Rookes House.



RULES

For Judging the Weather,

BY THE

RISE AND FALL OF THE BAROMETER.

BY MR. PATRICK.

THE rising of the Mercury presages in general Fine Weather; and its falling, Foul, as Rain, Snow, high Winds and Storms.

2. In very Hot Weather, especially if the Wind be South, the falling indicates Thunder.

3. In Winter, the rising protends Frost; and in Frosty Weather, if it falls three or four tenths, there will certainly follow a Thaw; but if it rises in a continued Frost, Snow generally succeeds.

4. When Foul Weather happens soon after the Mercury has fallen, expect but little of it; and, on the contrary, expect but little Fine Weather, if it proves Fair very soon after the Mercury has risen.

5. In Foul Weather, when the Mercury rises much, and high, and so continues for two or three Days, before the Foul Weather is quite over, then expect a continuance of Fair Weather to follow.

6. In fair Weather, when the Mercury falls much and low, and thus continues for two or three Days before the Rain comes, then expect a great deal of Rain, and probably high Winds.

7. The unsettled motion of the Mercury denotes uncertain and changeable Weather.

8. You are not to be governed absolutely by the Words engraved on the scale of the Barometer, (altho' in general the Weather will nearly agree with them,) as to the rising and falling of the Mercury; for if it stands at much Rain, and then rises to changeable, it presages Fair Weather, but not of so long continuance as it would have been if the Mercury was higher; and, on the contrary, if the Mercury stood at Fair, and falls to Changeable, it presages Foul Weather, but not so much of it as if it had fallen lower.

From these Observations, it appears, that it is not so much the height of the Mercury that indicates the Weather; as its motion up and down; and for this reaſon it is necessary to know at any time whether the Mercury is rising or falling, in order to judge, with some degree of probability, what Weather may be expected; for which purpose, the following Rules will be found useful:—

1. If the surface of the Mercury be *convex*, rising higher in the center of the Tube than at the sides, it is generally a proof that it is

then rising, and presages the approach of Fair Weather.

2. If the surface of the Mercury is lower in the center than at the sides, it is falling, and indicates Foul Weather.

3. If it is level, or very little convex, it is stationary, and presages a continuance of the then state of the Weather.

4. But to judge still more precisely of its inclination either to rise or fall, it may not be amiss to strike the Frame gently, so as to affect the Mercury in the Tube, and it will immediately rise or fall about a twentieth of an Inch, which-ever way it inclines, unless it is then stationary, in which case it will not be perceptibly affected."

DOCTOR HALLEY *observes,* That during great Winds, though unattended with Rain, the Mercury is lowest of all, with regard however to the point of the Compass from whence the Wind blows, as the greatest rise of the Mercury is on Easterly and North Easterly Winds, and the greatest fall on Southerly and Westerly Winds.

That after great storms of Wind, when the Mercury has been very low, it generally rises again very fast. He once observed it rise an Inch-and-a-half in less than 6 Hours, after a long continued storm of South Weſt Wind.

That

That in calm, Frosty Weather, the Mercury generally stands high.

DOCTOR BEAL *observes*, That the Mercury is higher in cold Weather than warm; and generally higher in the Morning and Evening, than at Noon.

That in settled Fair Weather, it is higher than either before, after, or during Rain; that it generally descends lower after Rain than it was before it; that if it rises higher after Rain it is generally followed by a settled serenity.

That there are frequently great changes in the Air, without any perceptible alteration in the Barometer.

The following Observations may not be unworthy of attention:—

"A continuance of Fair Weather, the Wind being in the North, and the Mercury high, or rising, is never succeeded by Rain, 'till the Wind changes to some Southerly point; and a continuance of Rain from the South is scarcely ever succeeded by fair settled Weather, before the Wind changes to the West, or some Northerly point.

The falling of the Mercury, when the Wind is full South, scarcely ever fails to presage Rain.

On the approach of cold, frosty, or foggy Weather, it rises pretty high; but on the approach of Windy or tempestuous Weather it will sink very low; and, as soon as the storm is over, will rise again briskly, as has been remarked above, by Dr. HALLEY. About the time of the Equinoxes, viz. March, and September, if the Mercury is about 29 Inches, or Rain, though it ſhould not then Rain, this state of the Barometer threatens much Rainy Weather till the next Equinox; and *vice versa* if about 30, or Fair, though it should Rain, it promises a greater proportion of fine Weather." (1)

Prognostic Signs of the Weather, from the Winds.

AMONG the causes which affect the Weather, there is none whose influence is more demonstrable than that of the Winds; these, though uncertain in appearance, are, like all other Phenomena of Nature, governed by fixed and determinate laws, and deserve a most serious investigation. When the Wind veers about uncertainly to several points of the Compass, Rain generally follows. By some it has been asserted, that if the Wind, in veering about follows the course of the Sun from East to West, it brings Fair Weather. but if it is from West to East, Foul.

A

---

(1) Preface to the Meteorologist's Assistant.

A whistling, howling Wind, is almost an infallible sign of Rain; it is a sign that does not seem to be confined to any Climate; for in the Sacred History, we find Elijah saying, "Get thee up, eat and drink, for there is a sound of abundance of Rain."

"Living Vegetables have a considerable effect in altering Climates, and affecting the Weather, wooded Countries are much colder than those that are open and cultivated; thus part of Guiana has only been cleared from wood since the beginning of this Century, and the heat in that part is already excessive; whereas, in the wooded parts, the Inhabitants are obliged to light a Fire every night.

Sir Wm. YOUNG gives a remarkable instance of the effect of Hills in arresting Vapours, and producing Rain, while the exhalations from the Trees on its surface, cool and temper the air; observing, that the smooth polished Barbadoes, and our Leeward Islands are parched up, whilst the towering and rugged Dominica, St. Vincent, Grenada, and Tobago, enjoy incessant Rains, and delicious verdure.

"It is generally agreed that the clearing away of wood in time, lessens the Vapours, and consequently the Rain of a Country. Several fine Parishes in Jamaica, which used to produce large crops of Sugar Canes, and were once the richest spots in the Island, are now dry for 9 Months in the Year, and are turned into

into Cattle Pens, through the clearing away of the neighbouring woods." (1)

The following Observations on the same subject were communicated to Mr. ADAMS, by a very ingenious Friend :—

" Water is very plentiful in those Countries where Woods and Forests abound. and the purest Springs are generally found beneath the friendly shelter of a Grove.

The natural History of every Country shews, that in proportion as the wood-lands are cleared, the water-courses diminish. In America, unfortunately for the Inhabitants, this truth is too well known; for since the woods in the vicinity of their Towns have been cut down, many long established Mill races have become dry, and others have been reduced so low as to cause very great interruptions to the Miller, who must wait a conſiderable time for the Dams to fill between every hour's work.

Hence we may learn the important necessity of preserving the Trees from beneath whose humid shades a water spring discharges its streams; and hence too we may learn, that the smallest springs may be improved by planting around them a grove of Trees, particularly the Oak, so highly valued by the Greeks, the Romans, and our ancient Druids, who, considering the health of man, and the fertility

(1) Adams Diſſertation on the Barometer, page 47.

fertility of the ſoil to be abſolutely dependent upon plentious ſtreams of Water, conſecrated their groves to preſerve their ſprings.

It were much to be wiſhed that ſome expedient could now be formed to anſwer the ſame valuable purpoſe.

Of ſituations, perhaps the moſt promiſing for the enjoyment of health, life, and every convenience, is near the bottom of an high Hill, that has a Southerly aſpect, with Woods and Plantations about the head of it; a dry ſoil of Sand or Gravel, with a mixture of loam and running Waters, with green Meadows before it, or the Sea, with a ſteep and clear ſhore of Gravel, or Beach. There may health fix her ſeat; but let no man think his ſituation will preſerve him, unleſs he has the prudence to preſerve himſelf. All the varieties of the Weather, all the Seaſons, and all the Elements are at War with the indolent and the intemperate." (1)

The learned Mr. KIRMAN, F. R. S. obſerves, that with reſpect to the annual temperature, we may remark,

Firſt, " That within 10 Degrees of the Poles, the temperatures differ very little; neither do they differ much within 10 Degrees of the Equator.

Secondly, The temperature of different Years

---

(1) Adams Diſſertation, page 49.

Years differ very little near the Equator, but they differ more and more as the latitudes approach the Poles.

Thirdly, It scarce ever freezes in Latitudes under 35°. unless in very elevated situations, and it scarce ever hails, in Latitudes higher than 60°.

Fourthly, Between Latitudes 35°. and 60°. in places adjacent to the Sea, it generally Thaws when the Sun's altitude is 40°. and seldom begins to Freeze, until the Sun's meridian altitude is below 40°."

When the variation of the Magnetic Needle was first discovered, it was to the Eaſt of the meridian of London. It has been since that time continually advancing to the West, so that in the Year 1657, the Magnetic Needle pointed due North and South, and at present its variation is about 22°. West.*

Dr. HALLY observes, that the whole period of variation is performed in about 700 Years. The variation is about 9 Minutes in a Year.

---

* See Cavallo's ingenious Treatiſe on Magnetiſm, and from which the following Table is taken:—

Declination of the Magnetic Needle, observed in London.

Years.	*Declination.*			
	Degrees.		Minutes.	
1576	11	—	15	*East.*
1580	11	—	11	
1612	6	—	10	
1622	6	—	0	
1633	4	—	5	
1634	4	—	5	
1657	0	—	0	*West.*
1665	1	—	$22\frac{1}{2}$	
1666	1	—	$35\frac{1}{2}$	
1672	2	—	30	
1683	4	—	30	
1692	6	—	0	
1700	8	—	0	
1717	10	—	42	
1724	11	—	45	
1725	11	—	56	
1730	13	—	0	
1735	14	—	16	
1740	15	—	40	
1745	16	—	53	
1750	17	—	54	
1760	19	—	12	
1765	20	—	0	
1770	20	—	35	
1774	21	—	3	
1775	21	—	30	
1777	22	—	12	
1778	22	—	$20\frac{1}{4}$	
1779	22	—	$29\frac{1}{2}$	
1780	22	—	41	

The 4 laſt Years are taken from the Philoſophical Tranſactions.

It appears by the Register of the Winds, for the last 10 Years, there has been in that time, 1693 Days of West and South West Winds, and 590 of East and North East.

The influence of Winds over Animal and Vegetable Life, is undoubtedly very great; and we feel, with a pleasing sensation, the salubrious West and South West, whilst the ’noxious East and North East Winds bring pestilential Disorders and Blights. Hence we see the goodness of PROVIDENCE in thus giving us so large a portion of those Winds, which tend to the preservation and comforts of Life.

FINIS.

BRITISH
22 DE 70
MUSEUM

ERRATA.

In the two Lines at the bottom of the Regiſter of the Weather for the Year 1794, *for* Remarble, *read* Remarkable; *for* page 28, *read* page 1; *and for* page 30, *read* page 3.

Page 2*nd*, *Line* 19*th*, *for* the PLATE 1ſt, *read* PLATE the 1ſt.

Page 4*th*, *Line* 14*th*, *for* aſter *read* after.

Page 12*th*, *Line* 20*th for* Dr. Hally obſerves, *read* Dr. Hally conjectures.

Page 14*th*, *Line* 5*th*, *for* anp *read* and

BRITISH
22 DE 70
MUSEUM